

# Difference and punishment: Ethno-political exclusion, colonial institutional legacies, and incarceration

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## Abstract

One dominant theoretical explanation for higher incarceration rates across the world focuses on how a nation's level of diversity or minority presence broadly writ unleashes racial resentment that can lead to incarceration. This article contends that population heterogeneity alone offers an incomplete picture of how ethnic-based tension can affect incarceration rates. Rather, we argue that majority ethnic groups around the world use prison systems in order to govern and manage minority populations, especially those systematically excluded from power. In addition, we argue that these political structures have their roots in a nation's colonial legacy, a legacy that shapes a nation's contemporary incarceration rates. Results from our quantitative analysis reveal that controlling for competing explanations, there are positive associations between ethnic political exclusion and the length and form of a nation's colonial experience and rates of incarceration.

## Keywords

cross-national analysis, ethnicity, incarceration

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## Introduction

Variation in global incarceration rates has emerged as a key area of focus for punishment scholars in recent years. While numerous studies highlight imprisonment trends within individual nations such as the United States, cross-national research is valued for its ability to help illuminate broader patterns the world over as well as inform theoretical development (Stamatel, 2009). One prominent line of thought in cross-national studies of incarceration draws on the *group threat thesis*, which points towards racial and ethnic hostility as a predictor of state actions like imprisonment, to explain a positive relationship between the presence of minority groups within a state and incarceration rates cross-nationally. Building on the arguments of scholars such as Herbert Blumer (1958) and Hubert Blalock (1967) regarding racial and ethnic relations, this growing body of research contends that punitiveness—and incarceration in particular—rises in states in which members of dominant groups may perceive threat from rising minority presence (Jacobs and Kleban, 2003; Miethe et al., 2017; Ruddell, 2005; Ruddell and Urbina, 2004, 2007). Incarceration, according to this argument, is a direct response to growing ethnic minority group presence within a state (King and Wheelock, 2007).

Although results commonly confirm the relationship between minority group *presence* and punitiveness (Ousey and Lee, 2008; Stults and Baumer, 2007), an empirical link between incarceration rates and *group threat* is lacking in much of this research. Indeed, a core assumption of this scholarship is that the presence of ethnic minority groups in a state necessarily corresponds to ethnic conflict or perceptions of threat. Such work generally relies on measures of the quantity of minority groups within nations to sustain the group threat thesis (for exceptions, see Ousey and Unnever, 2012; Unnever and Cullen, 2010). We contend, however, that minority presence alone does not confirm ethno-political conflict. A more adequate linkage between ethnic diversity and punitiveness remains to be established.

To advance an understanding of the relationship between punishment and conditions of socio-political conflict, we draw on Andreas Wimmer's (2002) conception of ethnic politics. This line of thought contends that ethnic conflict impacts political practice globally, *not* because of inherent propensity for competition between ethnic groups, but because governments controlled by a single dominant group wield state apparatuses to privilege insiders and exclude others as a means of consolidating control and asserting legitimacy (Wimmer, 2008; Wimmer et al., 2009). As such, we approach incarceration as an *ethno-political resource* with which dominant ethnic groups might enhance their own legitimacy and repress, manage, and exclude outside groups. Our analysis of ethnicity and punitiveness moves beyond measures of ethnic fractionalization to instead examine factors such as ethnic population *exclusion* from governance and a nation's colonial legacy—often bound in a developmental history of ethnic-based dominance. Where scholars of punishment disparities within individual nations have demonstrated that majority group stakeholders may mobilize criminal justice institutions to exclude

minority populations (e.g. Uggen and Manza, 2002; Van Cleve, 2016; Wacquant, 2010), we assess cross-national trends to unpack the relationship between ethnic control of political power and rates of incarceration more broadly.

To this end, we conducted a multivariate regression analysis drawing on data from 134 nations from the years 2000 to 2010. We test the exclusion of minority ethnics from political power, as well as a nation's colonial legacy, against competing explanations for incarceration rates across these nations. This analysis greatly strengthens our understanding of the role of group threat and ethnic division in incarceration rates cross-nationally. In particular, we find that ethnic consolidation of state power, as well as colonial history, is strongly and positively associated with higher rates of incarceration, advancing beyond fractionalization or diversity as a key explanatory variable in the deployment of carceral apparatuses against competing minority ethnic groups.

## Group threat and punitiveness

Ethnicity may be defined as “a subjectively felt sense of belonging based on the belief in shared culture and common ancestry” (Wimmer, 2008: 973). This sense of shared belonging may emerge in various forms. Markers of ethnicity can be identified along the lines of shared cultural practices or customs, physical or phenotypical similarity, religious belief and myths, language, or regional territory (Jenkins, 1994; Weber, 1978; Wimmer, 2008). Broader group categories, such as “race” or “nationhood” may also be subsumed under this definition. Conflicts across ethnic boundaries are a chronic feature of human history. Endeavoring to explain this, the *group threat thesis* contends that dominant groups feel threatened by minority populations—and growing minority populations in particular (Quillian, 1995). As a result, non-minorities may demonstrate prejudice and even punitiveness towards ethnic minority groups.

There is strong theoretical support for the notion that perceived or real minority group threat might result in increased incarceration rates. Indeed, the role of punishment in reaffirming social values as well as boundaries is well established in the discipline (e.g. Durkheim, 1893/1997), as is the role of ethnic competition—or anxieties over *perceived* competition—in shaping prejudice and punitiveness (Jackson, 1989; Melossi, 2003; Ousey and Unnever, 2012; Quillian, 1995). Empirically, however, studies of the relationship between ethnic threat and incarceration are often imperfect in the operationalization of group conflict. Specifically, research in this area commonly relies on measures of group heterogeneity (i.e. fractionalization along the lines of ethnic population diversity) to stand in for group threat to predict incarceration rates both domestically and internationally.

At the national level, numerous studies demonstrate a positive relationship between minority population size and punitiveness in the United States. Jackson (1989) reveals that high minority presence in U.S. cities in the 1970s corresponded to increased funding for and reliance on the police by the non-minority population. Greenberg and West (2001) demonstrate that such patterns intensified following

the 1970s through the 1990s, controlling for crime rates. Other scholars point to inverse developments in penal and welfare apparatuses corresponding to the size of black populations within states, such that welfare state retrenchment corresponds with rising punitiveness, limiting social support for minority communities while disproportionately policing and incarcerating them (Beckett and Western, 2001; Wacquant, 2010).

Beyond patterns of ethnic exclusion via incarceration in the United States, similar practices have been observed internationally. A growing body of work explores minority group threat and incarceration rates worldwide to suggest that penal punishment operates as a tool through which dominant groups might regulate racial or ethnic minority populations across nations and regimes. Jacobs and Kleban (2003) demonstrate a relationship between the percentage ethnic minorities comprising a nation's population on imprisonment rates in 13 progressive democracies. Other researchers reveal similar patterns in democratic as well as non-democratic states (e.g. Miethe et al., 2017; Ruddell, 2005; Ruddell and Urbina, 2004, 2007). Still others examine links between group threat and other forms of punitiveness cross-nationally, such as in terms of increased police funding and presence (Stults and Baumer, 2007) or support for capital punishment (Dambrun, 2007; Jacobs and Carmichael, 2002; Kent, 2010).

Overall, this body of work suggests a positive relationship between population heterogeneity and the mobilization of state power against minority populations, revealing global patterns of ethnically-imbalanced state use of carceral apparatuses. Yet, conceptually, this literature often rests on assumptions regarding conflict and group threat that may not be adequately captured. One area in which these studies fall short, we contend, is in coupling fractionalization—or even percent minority—and ethnic threat in empirical models. Despite its widespread use as a predictive variable, ethnic fractionalization is not commonly supported by convincing causal mechanisms linking it to political outcomes (Cederman and Girardin, 2007). Much of this work draws on theoretical insights from Blumer (1958) and Blalock (1967), who contend that dominant groups feel threatened when the presence of minority ethnic groups increases. As such, researchers to date have often taken the *presence* (or quantity) of ethnic minority groups within states to necessarily reflect minority *threat*. Perceived group threat, then, is typically measured in terms of the size of minority groups relative to that of the majority (King and Wheelock, 2007; Quillian, 1995).

In addition, many studies in this tradition limit analyses to developed, democratic nations such as the United States or Western European states (Jacobs and Carmichael, 2001; Jacobs and Kleban, 2003; Ousey and Unnever, 2012; Quillian, 1995). This, too, has problematic implications, suggesting that the mobilization of carceral punishment against minority groups is both germane and unique to the West. Although such studies do “help us understand contrasts in the proportion of the population that is incarcerated in advanced democracies” (Jacobs and Kleban, 2003: 725), other studies reveal that non-democratic states may exhibit similar trends in punishment (e.g. Ruddell, 2005).

## Ethnic politics and state power

To better assess the relationship between punishment practices and social and political conditions globally, we draw on the ethnic politics perspective of Wimmer and colleagues (e.g. Wimmer, 2002; Wimmer et al., 2009). In particular, we extend Wimmer's (2002) insight that ethnicity may be mobilized as an institutional resource by state actors. While other thinkers contend that ethnic diversity impacts the use of state power directly, this body of research reveals that governments controlled by a single, dominant group strategically mobilize the power of state apparatuses. Such arrangements benefit insiders and exclude outsiders. In this way, dominant groups consolidate control and assert legitimacy over minority groups, not as a response to fractionalization alone, but in a manner contingent upon the configuration of ethnic political control (Wimmer et al., 2009). Whether and to what extent ethnically-motivated strategies or resources are deployed may be determined by the distribution of power, institutional order, and political network structure of a given state field (Wimmer, 2008).

It is not the mere presence or size of minority populations that explains state deployment of punishment, as the group threat thesis maintains; rather, according to the ethnic politics perspective, it is the extent to which such populations remain excluded from power. This may be illustrated by two brief examples. On the one hand, consider the status of the indigenous populations of Chiapas and Mexico. This ethnic minority group has historically been excluded from national level government and executive power in Mexico. Despite efforts to be incorporated into the modernizing nation-state (through strategies of "indigenismo" (Marquez, 2012)), indigenous Mexican peoples have frequently been subjected to expressions of punitive state power (Collier and Quaratiello, 1994). On the other hand, consider the French-speaking population of Canada. Despite their identity as speakers of a minority language in their nation, this group remains part of the ruling coalition and is well represented at the highest levels of Canadian government (Laponce, 1984). As such, they have not been disproportionately targeted by the punitive arm of the state.

The ethnic politics approach has been applied to the study of civil war (Denny and Walter, 2014; Lieberman and Singh, 2012; Wimmer et al., 2009), terrorism (Choi and Piazza, 2016), genocide (Goldsmith et al., 2013), election quality (Kolev, 2014), and non-violent civil resistance (Chenoweth and Ulfelder, 2015). To the best of our knowledge, this theory of ethnic politics has not been drawn on to explain global differences in incarceration. Yet, punishment and incarceration, like other outcomes, may be understood as political strategy or *ethno-political resource* within a field of group conflict.

When applied to state incarceration strategies, the ethnic politics paradigm is consistent with contemporary theories of punishment. Political dynamics, cultures, and institutions have been identified as central to organizing penalty in national contexts (Gallo, 2015). Regarding ethnicity, scholars of punishment disparities have demonstrated that regimes may rely on criminal justice institutions to

establish the legitimacy of ethnically-dominated states (LaFree, 1998; Ruddell, 2005) as well as to oppress or exclude minority populations from participation in political action, formal labor markets, and other segments of civic society (Blackmon, 2008; Goffman, 2009; Uggen and Manza, 2002; Van Cleve, 2016; Wacquant, 2009; Wakefield and Uggen, 2010; Western and Pettit, 2010). Punishment may engender solidarity amongst groups represented by the punishers (Carvalho and Chamberlen, 2017; Durkheim, 1893/1997). Indeed, “tough-on-crime” rhetorics have been successful tools in securing white political support, reinforcing the notion that dominant ethnic groups mobilize carceral apparatuses to consolidate and legitimate control (Lynch, 2009; Sudbury, 2014).

This previous research allows us to make our first hypothesis:

H1: Nations with higher levels of ethnic-based political exclusion will have higher rates of incarceration than nations with lower levels of ethnic-based political exclusion.

In addition to ethno-political control manifesting itself as a punitive force in the contemporary environment, previous research explores ways that a historical legacy of ethnic-based political exclusion should have similarly deleterious impacts on ethnic minority communities (Calhoun, 1997; Hechter, 2003; Wimmer and Min, 2006; Wimmer et al., 2009). A directly related specific form of historic ethnic-based inequity is a nation’s colonial legacy. A nation’s experience with colonialism largely shapes the extremity of the ethno-political environment, exacerbating historic tensions between governing ethnic elites and minority populations. Critical prison studies scholars argue that this tension traditionally emerged in the form of introducing coercive systems to segregate and manage indigenous populations (Hogg, 2001; Nichols, 2014).

Aside from the specific ethno-political dimensions of colonialism, the historical form of the latest wave of colonialism is also notable (Bergesen, 1980). Colonial projects often took the form, at least in part, of “penal” colonies where colonial lands would be used for incarceration. The goal of such incarceration often rested upon the coercion of indigenous peoples into labor for various colonial infrastructure projects (Anderson, 2016). As with other forms of vestigial infrastructure from the colonial era that carry various consequences for contemporary economic and social development (Bodenheimer, 1971; Frank, 1966, 1967; Lange et al., 2006), colonial penal systems carry forward important physical and symbolic markers that make colonial lands more likely to have higher rates of incarceration than nations without long legacies of colonialism. This framing suggests an institutional legacy approach to understanding cross-national incarceration rates.

This allows us to make our second hypothesis:

H2a: Nations with a longer imperial legacy will have higher rates of incarceration than nations with shorter, or no imperial legacies.

Punitive practices under colonization exhibit similarities across contexts, often in spite of differences between colonizing nations. Indeed, as Sherman (2009) notes, “the scholar of prisons under British rule in India or East Africa will find little that is utterly unfamiliar in places of incarceration from French Indochina to New Spain” (p. 660). Nevertheless, there is reason to expect that the form of a nation’s colonial legacy—in particular, the structure of colonial administration—might impact the manner in which penal punishment is administered. For instance, historically, British colonial rule characteristically favored systems of “indirect rule,” under which indigenous populations were often granted forms of political autonomy. In British sub-Saharan Africa, for example, colonial rulers typically permitted native authorities some degree of autonomy to manage local police, courts, and prisons, albeit with certain proscriptions (Bernault, 2007). French colonization, on the other hand, favored forms of “direct rule.” Unlike their British counterparts, French colonial rulers often instituted white judges within their African colonies. These bifurcated judicial processes resulted in adherence to differing penal codes in the arbitration of offenses committed by Europeans than by Africans (Bernault, 2007). While imprisonment stood as a consistent feature of colonial rule across these colonies, the way that offenses were adjudicated and punishment imposed often took different shape. As such, we might expect nations that experienced systems of indirect colonial rule to exhibit lower rates of imprisonment today, following a legacy of greater local control over judicial and penal practices.

As a particular form of experience with direct rule dependency, a nation’s specific interaction with Stalinist-style communism has been linked to particularly harsh penal practices (Hardy, 2012; Rau, 1999). The Stalinist Gulag system, developed as a mass imprisonment apparatus, seeks to control and coerce labor from convicted criminals—both of the political and traditional variety. A key component to this Soviet style was a particular focus on extracting value from the labor of prisoners, a foundational principle that stalled or inhibited the liberalization of Soviet era prisons compared to Western European penal systems (Zemlyanska, 2005). The legacy of a nation’s association with the Gulag system can therefore be theoretically linked to higher rates of incarceration in contemporary, post-Soviet contexts.

These lines of thought inspire our final two hypotheses:

H2b: Nations with colonial rulers that typically ruled through direct rule should have higher rates of incarceration than those favoring indirect rule.

H2c: Former Soviet dependencies should have higher rates of incarceration than non-Soviet dependencies.

## **Competing paradigms for understanding incarceration rates**

Several indicators emerge as robustly related to incarceration rates across multiple studies, indicating consensus regarding their relation to punitive practices. First,



gross domestic product per capita (GDP per capita) is positively related to incarceration such that richer countries exhibit greater incarceration rates (Jacobs and Kleban, 2003; Sutton, 2004). Relatedly, Ruddell and Urbina (2007) find that growth in a nation's GDP is related to its incarceration practices. States rely on a certain level of capacity to govern populations using highly organized carceral systems; thus, nations boasting higher levels of economic development overall tend to have higher rates of incarceration.

Several criminological indicators also emerge as related to incarceration rates. The incidence of homicide—a well-documented offense across countries, relative to measures of other crimes—is commonly deployed as a “supply-side” predictor of penal practices. The conspicuous nature of murder may amplify public perceptions of crime as well as punitive responses to it (Zimring and Hawkins, 1997). Cross-national studies illustrate that the higher a nation's homicide rate, the greater its rate of prison growth (Jacobs and Kleban, 2003; Ruddell, 2005; Sutton, 2000, 2004). Additionally, whether or not a nation has an active death penalty seems to be a general indicator for its punitiveness. Lower rates of incarceration correspond to the abolition of the death penalty within states (Ruddell and Urbina, 2004; Sparks, 2003). What's more, Ruddell and Urbina (2004) report that lower population heterogeneity (or fractionalization) was related to less incarceration and the abolition of capital punishment, cross-nationally.

Taken together, these studies suggest that comparative, cross-national examination of the use of penal punishment is a fruitful line of inquiry, yet much remains to be understood in terms of other social dynamics that might drive rates of incarceration. This article intervenes here, proffering that ethnicity operates as a political resource for those in power, governing in the name of a particular ethnic group (Wimmer et al., 2009). We suggest that, net of factors found to be important in the existing literature, ethnic exclusion from power and a lengthy colonial history should be related to higher levels of incarceration. The section that follows lays out our explicit research strategy, including a description of our data, variables, and modeling strategy.

## **Research strategy**

### *Data*

We make use of a cross-national dataset covering 134 countries from 2000 until 2010 (see Appendix 1). Descriptive statistics of each variable used in our analytic sample are included in Table 1. Much of these data come from the Ethnic Power Relations Version 3.0 (EPRV3) dataset (Wimmer et al., 2009), though several measures were coded from original sources, described in Table 1. While all reputable sources, it is important to note that data from better resourced countries are often considered more reliable and accessible—this is an unfortunate and unavoidable limitation of these data. In total, 692 country-years are included in this dataset based on availability of data. As data on the dependent variable are gathered at



**Table 1.** Descriptive statistics of variables in analysis.

Variable	N	Mean	SD	Min.	Max.	Source
Rate of incarceration	692	155.12	122.37	17	755	World Prison Brief Data
Rate of incarceration (ln)	692	4.79	0.72	2.83	6.63	World Prison Brief Data
Excluded population	692	0.13	0.16	0	0.85	EPR Dataset (V. 3.0)
Excluded population (ln)	692	1.84	1.41	0	4.48	EPR Dataset (V. 3.0)
Colonial history	692	0.45	0.30	0.00	0.99	EPR Dataset (V. 3.0)
Ethnic fractionalization	692	0.39	0.27	0.00	0.93	EPR Dataset (V. 3.0)
Common law legal system	692	0.06	0.25	0	1	JuriGlobe
GDP per capita (1 yr. lag)	692	11.1	12.25	0.29	62.64	EPR Dataset (V. 3.0)
Population (ln, 1 yr. lag)	692	9.56	1.40	6.48	14.1	EPR Dataset (V. 3.0)
Death penalty	692	0.42	0.49	0	1	Amnesty International
Homicide rate	692	11.11	13.25	0.51	74.3	United Nations
Homicide rate (ln)	692	1.76	1.18	-0.67	4.31	United Nations
Income inequality	692	40.22	9.35	24.6	62.2	World Bank; CIA World Factbook
Federalist political system	692	0.18	0.38	0	1	Forum of Federations
Political instability	692	0.08	0.27	0	1	EPR Dataset (V. 3.0)
Regional autonomy	686	0.22	0.41	0	1	EPR Dataset (V. 3.0)
Democracy (1 yr. lag)	692	0.65	0.48	0	1	EPR Dataset (V. 3.0)
Colonial ruler = UK	692	0.23	0.42	0	1	Hensel (2014)
Colonial ruler = Netherlands	692	0.02	0.13	0	1	Hensel (2014)
Colonial ruler = Belgium	692	0.01	0.10	0	1	Hensel (2014)
Colonial ruler = France	692	0.11	0.32	0	1	Hensel (2014)
Colonial ruler = Spain	692	0.15	0.36	0	1	Hensel (2014)
Colonial ruler = Portugal	692	0.02	0.15	0	1	Hensel (2014)
Colonial ruler = Germany	692	0.01	0.09	0	1	Hensel (2014)
Colonial ruler = Austria-Hungary	692	0.03	0.18	0	1	Hensel (2014)
Colonial ruler = Russia	692	0.10	0.29	0	1	Hensel (2014)
Colonial ruler = Ottoman	692	0.10	0.30	0	1	Hensel (2014)
Colonial ruler = China	692	0.01	0.09	0	1	Hensel (2014)
Colonial ruler = Japan	692	0.01	0.09	0	1	Hensel (2014)
Year	692	2005.1	3.35	2000	2010	EPR Dataset (V. 3.0)

non-annual intervals, missing country-years are removed from the dataset. Table 1 includes summary statistics and sources of the data.

### *Dependent variable*

Following leading scholarship on this topic, our key dependent variable is the natural log of the rate of incarcerated persons per 100,000 across 134 nations from the years 2000 to 2010. These data were collected from the World Prison Brief online database, hosted by the Institute for Criminal Policy Research (ICPR) at Birkbeck, University of London (Walmsley, 2015). Data are reliably gathered

for each country at distinct intervals. For instance, for the United States, data are available for the years 2000, 2002, 2004, 2006, 2008, and 2010; meanwhile for Jamaica, data are available for the years 2003, 2005, 2007, and 2009. In sum, our analytical sample covers 692 country-years.

### *Independent variables*

To assess the extent to which ethnic-based control of politics is related to national incarceration rates, we include the variables used to model ethnic power processes in previous research (Wimmer et al., 2009). First, we include in our models a variable that indicates the share of the nation's population that is excluded from political power through discrimination or outright legal exclusion. In other words, political exclusion refers to "the share of the excluded population [from influence over or representation in political practice] in the total population that is ethno-politically relevant" (Wimmer et al., 2009: 327). In addition, and to assess elements that could mitigate this factor, we include a measure for whether or not a nation grants regional autonomy to at least one minority ethnic group. This measure too can be found in the EPRV3 dataset.

Second, and following both Wimmer and colleagues' work (2006, 2009), as well as Calhoun (1997), we include a measure of the percentage of years since 1816 that a nation was under colonial rule. This measure considers as colonial rule years in which a nation had a "colonial or imperial dependency" (Wimmer et al., 2009), or was conquered by a neighboring empire. Although this coding is consistent with other Correlates of War (COW)-based datasets, beginning in 1816, we recognize there is some left censoring occurring in our data file, with some nations with colonial experience in the more distant past being excluded from this measure. Nevertheless, this variable captures a good deal of the total length of experience with colonialism of various nations.

To examine the effect of particular colonial experiences, we include a measure of "primary colonial ruler" found in Paul Hensel's (2014) ICOW Colonial History Data Set, version 1.0. This variable corresponds to the identity of the foreign power that ruled the colony during the colonial era. While some countries had only a single colonizing foreign power, many others have more complicated histories and were shared between multiple imperial powers or changed hands several times. This measure is defined as "the colonial or imperial power that was most responsible for shaping the development of the entity (or entities) that became this modern state" (Hensel, 2014).

### *Control variables*

Previous literature has explored the extent to which a nation's level of diversity, measured as an index of racial fractionalization, has been related to its punitiveness (Ruddell and Urbina, 2004), as well as overall imprisonment rates (Ruddell, 2005). In order to test how this concept operates with respect to our focal

independent variables, we, too, include a measure of ethnic fractionalization. This measure is based on the EPRV3 dataset and previously drawn from Fearon and Laitin's (2003) seminal work on civil conflict (Wimmer et al., 2009).

There have been several strong quantitative studies exploring factors that should be theoretically associated with higher levels of incarceration in a nation. For instance, a factor that has consistently been found to be associated with higher imprisonment rates has been homicide rates at the national level (Jacobs and Kleban, 2003; Sutton, 2004; Ruddell, 2005; Ruddell and Urbina, 2004, 2007). As such, we include the average level of homicide across all available years of the study (as data are available) for each nation, following previous work. These data are collected from a publicly available source, the United Nations Office on Drugs and Crime (UNODC, 2013). It should be noted that these UN data incorporate estimates where necessary to address instances of underreporting or other anomalies, as highlighted by Kanis et al. (2017). These remain the best available data for the present efforts. Scholars have suggested that nations that exhibit punitiveness in other arenas of criminal justice should likewise have higher incarceration rates. Following Ruddell (2005), we include a measure of whether (1) or not (0) the nation has a legal death penalty in the given country-year. This measure comes from Amnesty International. We code years in which nations abolish the death penalty for non-military offenses, such as treason, as a "0"—for instance, if nation X abolished the death penalty in 2007 that is indeed the year in which it is coded "0."

Following several studies that suggest that inequality should be related to higher rates of incarceration, we include a measure of income inequality in a nation based on the well-known GINI coefficient, which represents the proportion of income owned by the bottom of the income distribution (Jacobs and Kleban, 2003; Sutton, 2004; Ruddell, 2005). This measure is collected from various publicly available sources, primarily the World Bank and the CIA World Factbook. Because the measure is available at different intervals across nations that do not perfectly correspond to the available years for rates of incarceration, we take the average of data for the available years and treat this as a constant rate across the time range. This procedure is standard across cross-national studies making use of the GINI coefficient and is theoretically sound as inequality in nations does not vary dramatically across as short of a time span as is reflected in this study. Further, to impute GINI values for several Middle Eastern countries, we follow the approach used by Alvaredo and Piketty (2014).

Additional state level characteristics are included in our analyses. First, a dichotomous variable indicating whether (1) or not (0) a nation has a federalist governance system—or whether the nation has devolved governance at the subnational level or not—has been found to be related to incarceration rates (Jacobs and Kleban, 2003). This measure is drawn from the Forum of Federations organization. We also include a measure of political instability often used in the cross-national literature on civil conflict. A dichotomous variable for whether (1) or not (0) the nation experienced a regime change in the past two years is added to the

models. Political instability is operationalized as an extreme shift of + or –3 points in the widely used Polity IV scale of democracy (Marshall et al., 2011; Wimmer et al., 2009). This measure is drawn from the EPRV3 dataset (Wimmer et al., 2009) and can be seen as accounting for the extent to which large-scale social change might affect punitiveness (Cheliotis and Xenakis, 2016). Finally, as nations with a common law legal system have been robustly linked to higher imprisonment rates (Ruddell, 2005), we include a dichotomous variable for whether or not a nation has this type of legal system. This measure is collected from the University of Ottawa's JuriGlobe classification of world legal systems.

We also include various measures reflecting national-level characteristics commonly adjusted for in quantitative cross-national studies. In particular, we include a measure of the log transformed GDP per capita, the log transformed population level of the nation, and the nation's level of democracy (PolityIV). These measures are included within the EPRV3 (Wimmer et al., 2009) and are merged with our complete data file. Finally, we include a linear year trend to account for temporal trends in our data.

### *Modeling*

We estimate our models using random-effects panel models corrected for heteroscedasticity and serial auto-correlation. This approach was chosen over a fixed-effects procedure, as these data contain several time-invariant predictors of interest as well as the highly unbalanced and small size of some of the panels (ranging from 1 to 6 observations), which can lead to biased fixed-effects estimations (Cohen, 2013).

Our first model assesses the net effect of ethnic political exclusion and the percentage of years under colonial rule since 1816 controlling for all theoretically relevant covariates. Our second model introduces our measure for regional autonomy. Finally, our third and final model includes the dichotomous measures for each colonial ruler. In this final model, we exclude our measure of percentage of years under colonial rule since 1816 as this measure is collinear with several dichotomous indicators for colonial ruler. In addition, our dichotomous measure for whether the nation has a common law-based legal system is excluded, as it too is collinear with the dichotomous indicator for British colonies. As a robustness check, and to further explore some inconsistent findings regarding previous work, we use the same procedure to estimate a final set of models (Models 4 and 5) based on the nations in the top 25% of GDP per capita in our sample. In this sub-sample, we do not include dichotomous indicators for colonial ruler, as many of these rich nations were themselves imperial powers. Results of this analysis are discussed below.

### **Results**

Our results in Table 2 lend strong evidence for several of the major hypotheses in this study and explain a comparable amount of variance to other studies in this

vein. First, we find that ethnic exclusion from political power is associated with higher rates of incarceration across the world.<sup>1</sup> Higher levels of populations excluded from power along ethnic characteristics is positively related to the level of incarceration in a nation across all models specified here (*full model*, coef. = .05,  $p < 0.05$ ). We also present a marginal effects model for descriptive purposes to better understand the size of this effect. Results described in Figure 1 offer that a 10% increase in ethnic exclusion results in around 660 additional individuals incarcerated per 100,000. A total increase across the entire range of the ethnic exclusion variable results in a predicted additional 5610 individuals incarcerated per 100,000.

Meanwhile, nations granting ethnic minorities regional autonomy has no statistically significant effect on incarceration rates. The percentage of years under colonial rule since 1816 is significant and positive, though inconsistently related to the rate of incarceration in a nation with an effect size of 0.52 statistically significant at the  $p < 0.05$  level in model 1. This relationship is confounded by the inclusion of the dichotomous indicator of regional autonomy in model 2, suggesting that nation's attempts to offer regional autonomy to marginalized groups mitigates some of the effects of colonial legacies on incarceration.

Model 3 presents results from the inclusion of dichotomous variables indicating specific "primary colonial rulers." We find that German, Russian, and Chinese colonies have higher rates of incarceration with strongly significant and positive effects detected. It should be noted that there are only one German and Chinese colony, respectively, coded in these data (Poland and Mongolia, respectively). Given that Poland was also a Soviet satellite, we interpret much of this finding as support for hypothesis H2c that formerly Soviet-controlled states have higher rates of incarceration. Meanwhile, only one other statistically significant association can be found in terms of the effects of particular primary colonial rulers—formerly Portuguese colonies maintain lower levels of incarceration than others. As Portuguese colonies were generally overseen through direct rule governance models, this result offers some, but generally inconclusive evidence to consider the inverse of H2b.

We find several competing explanations to be statistically related to national incarceration rates. Notably, the index of ethnic fractionalization carries a negative association with incarceration rates in these models with statistically significant associations detected across the full sample of nations. We do not believe this to be the result of multi-collinearity between ethnic fractionalization and either of the focal predictor variables as the Pearson's correlation between these variables is very low, and the variance inflation factor (VIF) for each model is quite low and well below the commonly accepted threshold of 10 (Hair et al., 1995; Kennedy, 1992; Marquardt, 1970; Neter et al., 1989). In line with some previous research that has noted an inconsistent association between diversity and incarceration (Ruddell, 2005), our analysis focusing on nations in the top quartile of nations by GDP per capita reveals a non-statistically significant relationship between ethnic fractionalization and rates of incarceration. Other variables found to be related to rates of incarceration are income inequality in model 3, as well as several

**Table 2.** Random effects estimates on cross-national incarceration rates.

Variables	(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)
Ethnic exclusion	0.06** (0.02)	0.06* (0.02)	0.05* (0.02)	0.12* (0.06)	0.14* (0.06)
% of years under colonial rule	0.52* (0.25)	0.48 (0.25)	—	−0.24 (0.22)	−0.25 (0.22)
Regional autonomy (I = yes)	—	0.18 (0.14)	—	—	−0.29 (0.20)
Ethnic fractionalization	−0.88*** (0.25)	−0.86*** (0.25)	−0.59* (0.24)	−0.83 (0.44)	−0.42 (0.49)
GDP per capita (lagged)	−0.00 (0.01)	−0.00 (0.01)	0.01 (0.01)	−0.00 (0.01)	−0.00 (0.01)
Population (ln, lagged)	−0.02 (0.05)	−0.04 (0.05)	0.03 (0.05)	0.06 (0.05)	0.10 (0.06)
Death penalty (I = yes)	0.11 (0.09)	0.11 (0.09)	0.11 (0.09)	−0.21 (0.19)	−0.37 (0.22)
Homicide rate (ln)	0.04 (0.06)	0.05 (0.06)	0.04 (0.07)	0.55*** (0.12)	0.53*** (0.12)
Inequality	0.01 (0.01)	0.01 (0.01)	0.03*** (0.01)	0.01 (0.01)	0.01 (0.01)
Federalist political system	0.15 (0.18)	0.11 (0.18)	0.13 (0.17)	0.34 (0.18)	0.26 (0.19)
Political instability	−0.00 (0.04)	0.01 (0.04)	−0.00 (0.04)	—	—
Democracy (lagged)	0.10 (0.06)	0.10 (0.06)	0.10 (0.06)	−0.66* (0.28)	−0.84** (0.30)
Common law (I = yes)	0.46 (0.24)	0.44 (0.25)	—	0.28 (0.17)	0.27 (0.16)
Primary colonial ruler = UK	—	—	−0.05 (0.24)	—	—
Primary colonial ruler = Netherlands	—	—	−0.29 (0.33)	—	—
Primary colonial ruler = Belgium	—	—	0.45 (0.49)	—	—
Primary colonial ruler = France	—	—	−0.50 (0.26)	—	—
Primary colonial ruler = Spain	—	—	−0.22 (0.25)	—	—
Primary colonial ruler = Portugal	—	—	−0.57* (0.23)	—	—
Primary colonial ruler = Germany	—	—	0.73*** (0.14)	—	—
Primary colonial ruler = Austria-Hungary	—	—	0.31 (0.31)	—	—

(continued)

Table 2. Continued

Variables	(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)
Primary colonial ruler = Russia	–	–	1.30*** (0.22)	–	–
Primary colonial ruler = Turkey	–	–	0.35 (0.22)	–	–
Primary colonial ruler = China	–	–	1.09*** (0.25)	–	–
Primary colonial ruler = Japan	–	–	0.10 (0.13)	–	–
Year	0.01** (0.00)	0.01** (0.00)	0.01* (0.00)	0.01** (0.01)	0.01** (0.00)
Constant	–23.05** (8.14)	–21.90** (8.17)	–16.65* (8.38)	–25.37* (10.38)	–23.54* (10.04)
Observations	692	686	692	173	173
R <sup>2</sup>	0.13	0.13	0.41	0.70	0.74

Note: Robust standard errors in parentheses and clustered by country-code.

\*\*\*p < 0.001, \*\*p < 0.01, \*p < 0.05.

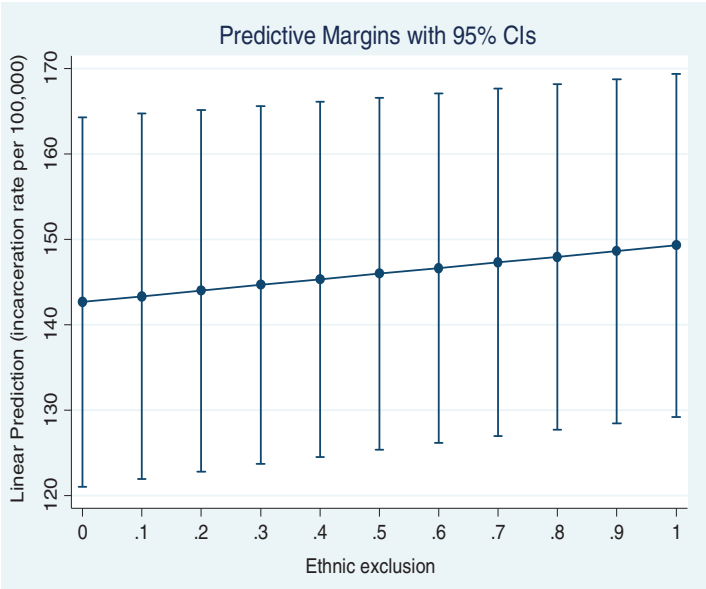


Figure 1. Predicted margins across levels of ethnic exclusion. Note this figure presents marginal effects for unlogged incarceration rate to aid interpretation.



variables in the reduced model, homicide rates, carrying a positive association and democracy regime type, carrying a negative relationship.

## **Discussion and conclusions**

The results presented here suggest that incarceration operates as an ethno-political resource on a global scale. The results of our analysis of incarceration rates and ethnic political exclusion across 134 nations from 2000 to 2010 suggest that states with higher levels of ethnic-based exclusion from power have higher rates of incarceration. The greater the population excluded from state power based on ethnic characteristics, the more strongly dominant groups use the state to imprison individuals they see as undesirable. While ethnic fractionalization may be related to the relative degree of ethnic power struggle, it is political exclusion itself (and not merely the presence or number of ethnic groups represented as population diversity) that drives the relationship between group threat and incarceration rates. This finding leads us to confirm hypothesis 1 that posits this relationship. We did not find, however, that granting ethnic groups regional autonomy mitigates this relationship.

We also found some statistical support for hypothesis 2a that nations with a longer experience with colonialism should have higher rates of incarceration than those without such an experience in model 1. This finding suggests that the legacy of colonialism continues to affect former colonized peoples of the world, directly shaping their experience with their governments. There are two major mechanisms suggested for this relationship. First, we argue that the colonial experience, as well as the memory of this experience, exacerbates the intensity of ethnic-based social conflict, leading to more punitive attitudes by governing elites. Second, the physical infrastructure left behind by former colonial powers creates a type of infrastructural opportunity that can lead to higher rates of incarceration. We fail to find support for hypothesis 2b that direct rule colonies experience higher rates of incarceration than indirect rule colonies, and in fact, we find some evidence to the contrary, as Portuguese colonies have on average lower rates of incarceration. Meanwhile, we find strong support for hypothesis 2c, that former Soviet dependencies will have higher rates of incarceration.

Beyond the economic contexts supporting the development of physical infrastructures of punishment, these findings may also be contextualized in terms of the psychological infrastructure of tough-on-crime policies. Contemporary research reveals shifting attitudes towards crime and punishment, especially in developed nations (e.g. Lynch, 2009; Pratt, 2007; Sudbury, 2014). As racial and ethnic relations shift over time alongside changing social ecologies, collective understandings of threat and the desire for security and control may evolve (Garland, 2001). Such reactionary support for increasingly harsh criminal justice strategies may be reinforced politically by elected officials espousing “war-on-crime” or other punitive rhetorics in accordance with rising public concern (Pratt, 2007; Simon, 2007). Extending from the work begun in the present study, future research should

explore the extent to which cultural support for punitiveness—whether in terms of shifting value systems (Garland, 2001), or emergent political rhetorics (Simon, 2007)—is associated with colonial past at a cross-national level.

In our full sample of nations, ethno-linguistic fractionalization remains negatively associated with incarceration. This remains true in the bivariate case between ethnic fractionalization and incarceration rates. Discrepancies between our work and previous findings with regard to ethnic fractionalization have three possible sources. First is regarding our sample of nations—which is larger than most studies, although we do acknowledge data limitations associated with developing nations. Second, our methodological choices to include random effects models with specifications related to corrected standard errors differ from the pooled OLS approaches used in previous work. Finally, the use of an ethno-linguistic fractionalization measure than differs from indicators previously used in empirical work on this topic, although it is a commonly used measure in international relations scholarship (Wimmer et al., 2009).

Our findings support the theoretical notion that incarceration represents a means to manage aggregate “undesirable” groups (Feeley and Simon, 1992; Wacquant, 2009). Further, our results extend this insight beyond explaining the political practices of the United States and other developed nations to assess variations in incarceration cross-nationally. Indeed, incarceration increases in ethno-politically dominated nations across global regions and regime types. This reveals that incarceration as a means of exclusion is not unique to the Western democratic world, but rather that punishment is connected to conditions of social conflict more generally.

Related to the burgeoning ethnic politics scholarship (Wimmer, 2002), this work adds incarceration to the array of political tools and practices drawn from a *repertoire* of strategies with which regimes may assert legitimacy as well as exclude and manage outside groups. States that exclude ethnic minorities from political participation may also utilize state power to influence the quality of elections (Kolev, 2014) or even turn to tactics such as genocide (Goldsmith et al., 2013). Such acts do not go unheeded, however, and exclusion of this sort may also lead to acts of terrorism (Choi and Piazza, 2016), civil war (Denny and Walter, 2014; Lieberman and Singh, 2012; Wimmer et al., 2009), or forms of non-violent civil resistance (Chenoweth and Ulfelder, 2015).

This article represents a novel contribution in this literature in that we examined linkages between colonial legacies, ethnic exclusion, and the use of punishment. Nevertheless, this analysis has some limitations that should be mentioned. While problems relating to data availability inhibited this analysis in some ways, we see three problems as bigger limitations to its theoretical contribution. First and most importantly, this analysis has not specifically addressed the proportion of the incarcerated populations that are from ethnically excluded populations. While data availability would inhibit such a study across as many nations as are included in this analysis, one may find reliable data on a smaller subset of nations to test this proposition. Second, this research cannot assess the extent to which dominant

ethnic groups in nations other than the United States use the rhetoric of criminalization to target minority populations. Finally, we acknowledge that cross-cultural differences in the form of punishment can affect estimates of incarceration rates. Specifically, countries that more often turn to restorative justice or have people that may settle disputes in non-legal ways can artificially deflate rates of incarceration. We see these as potentially fruitful arenas for future research.

## Note

1. OLS bivariate associations between incarceration and ethnic exclusion are ( $\beta = 0.07^{***}$ ) and the percentage of years under colonial rule are ( $\beta = 0.25^{**}$ ). Xtset panel random effects associations with only the focal predictors and a linear time trend are ( $\beta = 0.04^*$ ) and ( $\beta = 0.30$ ), respectively. We believe the tables presented to be the more conservative modeling approach.

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**Appendix I.** List of nations in analysis.

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Albania  
Algeria  
Angola  
Argentina  
Armenia  
Australia  
Austria  
Azerbaijan  
Bangladesh  
Belarus  
Belgium  
Bolivia  
Botswana  
Brazil  
Bulgaria  
Burkina Faso  
Burundi  
Cambodia  
Cameroon  
Canada  
Central African Republic  
Chad  
Chile  
China  
Colombia  
Congo  
Costa Rica  
Cote d'Ivoire  
Croatia  
Czech Republic  
Denmark  
Dominican Republic  
East Timor  
Ecuador  
Egypt  
El Salvador  
Estonia  
Ethiopia  
Finland  
France  
Georgia  
Germany  
Ghana  
Greece  
Guatemala

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(continued)

**Appendix I.** Continued

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Guinea  
Haiti  
Honduras  
Hungary  
India  
Indonesia  
Iran  
Ireland  
Israel  
Italy  
Jamaica  
Japan  
Jordan  
Kazakhstan  
Kenya  
Kyrgyzstan  
Latvia  
Lebanon  
Lesotho  
Liberia  
Libya  
Lithuania  
Macedonia  
Madagascar  
Malawi  
Malaysia  
Mali  
Mauritania  
Mexico  
Moldova  
Mongolia  
Montenegro  
Morocco  
Mozambique  
Myanmar  
Namibia  
Nepal  
Netherlands  
New Zealand  
Nicaragua  
Niger  
Nigeria  
Norway  
Oman  
Pakistan

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(continued)

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**Appendix I.** Continued

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Panama  
Papua New Guinea  
Paraguay  
Peru  
Philippines  
Poland  
Portugal  
Romania  
Russia  
Rwanda  
Saudi Arabia  
Senegal  
Sierra Leone  
Slovakia  
Slovenia  
South Africa  
South Korea  
Spain  
Sri Lanka  
Sudan  
Swaziland  
Sweden  
Switzerland  
Syria  
Tajikistan  
Tanzania  
Thailand  
Togo  
Trinidad and Tobago  
Tunisia  
Turkey  
Turkmenistan  
Uganda  
Ukraine  
United Arab Emirates  
United Kingdom  
United States of America  
Uruguay  
Uzbekistan  
Venezuela  
Vietnam  
Yemen  
Zambia  
Zimbabwe

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